Reply to Office Action of March 13, 2006

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## **REMARKS/ARGUMENTS**

## Status of Claims

Claims 1-13, 15-32, and 37-40 are pending in this application, based on the recitation in the Office Action dated March 13, 2006. Claims 7 and 18 are objected to. Moreover, Applicant notes that while claims 9-11 had previously been withdrawn, they are currently being rejected by the Examiner. Since the claims are now relevant to the particular subject matter recited in amended claim 1, the claims have been appropriately amended, and Applicant is assuming they can be actively prosecuted.

The Examiner had also indicated that claim 13 had been withdrawn from consideration. Applicant has no record of the claim being withdrawn, and the Examiner may want to clarify this point. Since claim 13 is relevant to amended claim 1, it is currently being treated as "active", i.e., not withdrawn.

A number of points were discussed during a very helpful telephonic interview with the Examiner, on July 7, 2006. Applicant believed that claims directed to aluminizing compositions with an epoxy resin were patentable over the prior art. The Examiner confirmed the position set forth on page 2 of the present Office Action (lines 3-5), regarding epoxy-based compositions. While acknowledging that further review on the part of the Examiner may be undertaken, Applicant has added new claims 41-43, and made claim 8 part of this "group" as well. Independent claim 41 recites the presence of an epoxy resin, along with an aluminum powder which contains an aluminum-silicon alloy. (A discussion of such an alloy and its benefits occurred in previous prosecution, as well as in the specification itself). It is believed that these claims should be allowed. If there is confirmation in that regard, it is possible that several additional, dependent claims may be added in a supplemental amendment, as the undersigned indicated to the Examiner.

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## Rejections Under 35 U.S.C. 102

Claims 1-6, 8-11, 13,15-17, 19-21, and 37-40 are now rejected under 35 U.S.C. 102(e), as being anticipated by Moravek et al, U.S. Patent 6,805,906 ("Moravek"). The patent describes a slurry composition which is based on a silicone-alkyd carrier. Aluminum, or an aluminum alloy, can be incorporated into the paint (col. 2, lines 62-67). The resulting coating can be applied to various articles, such as turbine blades and vanes. An example of a preferred carrier is a Benjamin-Moore paint, designated as grade M66-79, described as being a silicone alkyd high heat aluminum paint (col. 3, lines 43-46). The Examiner also attached a specification sheet for the paint.

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Applicant agrees that the Moravek reference includes some components which are similar to the present invention. However, there are differences as well. While describing the use of certain silicone alkyds, Moravek fails to describe the presence of many of the other organic resins taught in claim 2 of the present invention, e.g., epoxy resins. Moreover, the reference fails to describe the presence of combinations of aluminum flakes and an aluminum powder, as generally covered in various claims of the present invention. As described in the specification, e.g., paragraph 42, the use of aluminum flakes with aluminum powder (e.g., powder particles) is preferred in some embodiments.

Moravek fails to describe other limitations set forth in some of the dependent claims. For example, the patent does not describe the specific organic solvents set forth in original claim 7. Moravek also does not disclose compositions which must be substantially free of hexavalent chromium. As described previously during prosecution (and in the specification), the elimination of such a compound is highly desirable in many embodiments. (It should be noted that the Benjamin Moore specification sheet does mention the fact that the paint itself can be formulated without lead, mercury, or chromates). Moravek also fails to specifically describe compositions which must have no greater than 10% phosphoric acid or phosphoric acid derivatives, as recited in claim 17.

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While not particularly relevant to a Section 102 Anticipation rejection, Applicant very briefly wants to comment on the nonobviousness of the claimed invention. The specification described in detail some of the problems of the prior art, e.g., obtaining a composition free of hexavalent chromium, which remained physically and chemically stable for a useful life cycle and storage time. Moreover, the extensive examples demonstrated how the discovery of the present invention solved many of those problems. Moravek alludes to the need for environmentally acceptable coatings, but fails to recognize that serious stability problems can arise when toxic materials like hexavalent chromium are eliminated from such coatings. Instead, the reference appears to be aimed mainly at aluminum diffusion coatings which have good "paint properties", e.g., leveling qualities which prevent cracking (col. 4, lines 45-52). The description in Moravek contains very little motivation for the discovery now claimed by Applicant.

As discussed during the referenced interview, Applicant has amended the claims, adding limitations to claims 1 and 37, while canceling various others. (For example, claim 40 now appears to be redundant with amended claim 37, and has therefore been taken out of the case). Since Applicant continues to maintain that much of the subject matter in the cancelled claims is still patentable over the prior art, the cancellation of those claims should be made "without prejudice". In other words, many of the claims are being cancelled to advance prosecution, and Applicant reserves the right to pursue them, in their original form, in one or more continuation applications.

As discussed with the Examiner, claim 1 now includes the limitation that the aluminizing composition contain both aluminum flakes and aluminum powder, along with a silicone resin component. Moreover, the claim recites a specific set of organic solvents which function as a liquid vehicle for the composition. Applicant submits that such a composition is never described nor suggested by Moravek. Similar changes have been made to claim 37, which is directed to a substrate covered by the aluminizing composition. Moreover, claim 44 has been added to recite the optional presence of the aluminum-silicon alloy in the composition of claim 1.

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## Conclusion

Again, the undersigned wishes to express appreciation to the Examiner for the time taken to discuss various aspects of this prosecution. It is hoped that there is now agreement on patentable subject matter in this case. If further matters require discussion, Applicant would be very willing to again initiate that dialogue.

Respectfully submitted,

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